

SECTION C – DESCRIPTION/SPECIFICATION/WORK STATEMENT

**Statement of Work
for
Explosive Ordnance Disposal Diver Engineering Services**

1.0 SCOPE

This Statement of Work describes the requirements to perform engineering services for the following EOD Diving Systems: MK 16 MOD 1 Underwater Breathing Apparatus (UBA) and MK 1 Mod 0 Mobile Support Facility (MSF). These services shall be provided through the execution of written task orders issued by the contracting officer.

2.0 APPLICABLE REFERENCE DOCUMENTS

The following documents are required in the execution and preparation of the tasks and deliverables described herein.

- a. Technical Data Packages for the MK 16 MOD 1 UBA and the MK 1 Mod 0 Mobile Support Facility
- b. NAVSEA TM SS600-AH-MMA-010 MK 16 Mod 1 UBA
- c. MSF O&M manual
- d. NAVSEA PMS Reference Disk N6591200439 (Disk 3 of 3)
- e. MIL-DTL-19595D, Magnetic Effect Limits for Non-magnetic Equipment used in the Proximity of Magnetic Influence Ordnance (as applicable)
- f. NAVSEA TM SS521-AA-MAN-010, US Navy Diving and Manned Hyperbaric System Safety Certification Manual
- g. MIL-STD-1330D, Precision Cleaning And Testing Of Shipboard Oxygen, Helium, Helium-Oxygen, And Nitrogen Systems
- h. ASME-Y14.100-2000, Engineering Drawing Practices
- i. Configuration Management Plan (CMP) S1317-00-000-A-P-C Revision F
- j. MIL-PRF-28002C, Digital Data Delivery Requirements Guideline for JEDMICS 2.5 Raster Data

The following documents are provided for guidance in the execution and preparation of the tasks and deliverables described herein. Many MIL-STD, MIL-SPEC documents have been cancelled without superceding documents, but however still contain pertinent guidance and information relevant to support of the MK1 Mod 0 MSF. These documents are to be used insofar as the information contained therein is applicable to the efficient maintainability of the systems.

SS521-AG-PRO-010	U.S. Navy Diving Manual, Rev 4, dtd 20 January 1999
MIL-STD-22D	Weld Joint Design: Structural and Piping in Ship Construction
MIL-STD-248D (*)	Welding and Brazing: Procedure and Qualifications
MIL-STD-271G (SH) (*)	Requirements for Nondestructive Testing Methods, Personnel Qualifications and Requirements and Procedures, Method Requirements
MIL-STD-278 (*)	Welding and Castings Standard
MIL-STD-410 (*)	NDT, Personnel Qualifications and Certification
MIL-STD-973	Specifications and Standards, Systemic Problems
MIL-STD-1330	Cleaning and Testing of Shipboard Oxygen, Nitrogen, and Hydrogen Gas Piping Systems

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MIL-STD-1627B (*) Bending of Pipe or Tube for Ship Piping Systems
MIL-STD-1689 Fabrication, Welding and Inspection of Ship Structure

2.1 ORDER OF PRECEDENCE

In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. In the event of a conflict between the text of this document and the Technical Data Package (TDP), the TDP takes precedence. Nothing in this document, however, supercedes applicable laws and regulations, unless a specific exemption has been obtained.

3.0 SERVICE REQUIREMENTS

This Statement of Work establishes the range of services and deliverables that may be needed to support approximately three hundred and forty (340) UBAs for deployed Explosive Ordnance Disposal (EOD) Units and seven (7) deployed MK 1 Mod 0 MSF. These services shall be provided at Contractor furnished facilities, using Contractor provided labor, resources, and tools in accordance with each individually issued task order.

3.1 GOVERNMENT FURNISHED INFORMATION (GFI)

- ◆ The respective TDPs (reference a) will be provided to offerors in SolidEdge® format (.dfx file) for drawings. The drawing package will be maintained in this format.
- ◆ The respective systems are managed and controlled by the Government, who will provide access to relevant in-service and depot information upon award of the contract.
- ◆ Upon award, the Government will provide copies of the MK 16 MOD 1 UBA Operation and Maintenance (O&M) Manual (reference b), the MK 1 Mod 0 MSF O&M manual (reference c), and the Planned Maintenance System (PMS) documentation set (reference d).

3.2 ENGINEERING SERVICES (CLIN 0001, AND IF OPTIONS ARE EXERCISED, CLINS 0002, 0006 AND 0010)

The contractor shall provide engineering services that will ensure the supportability of the UBA and the MSF in the Fleet. Tasks required are described in the following paragraphs.

3.2.1 Fleet Engineering Support. Engineering assistance shall be provided to the Fleet including on-site engineering investigations, engineering and support assistance, and support and coordination for delivery and installation of Engineering Change Proposals (ECPs). The contractor shall:

- Analyze operational and maintenance data to determine design defects;
- Recommend corrections or improvements;
- Develop engineering changes and/or alterations; and
- Review engineering changes for impact on performance, reliability, cost, safety, and logistic support.

The contractor shall be intimately familiar with the requirements and procedures necessary to manage systems covered by magnetic signature restrictions and procedures. For purposes of this effort, the magnetic signature issues apply to the MK 16 UBA only. This knowledge includes,

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but is not limited to, the requirements and procedures needed to manage non-magnetic systems and equipment as described by reference (e).

The contractor shall be intimately familiar with the requirements and procedures necessary to manage a life support system. This knowledge includes, but is not limited to, the Oxygen-clean (O₂-clean) requirements and procedures of reference (f) and the requirements and procedures of reference (g).

3.2.2 Technical Data. Technical manuals and PMS documentation shall be maintained and applicable system specifications and standards shall be monitored. The contractor shall maintain technical accuracy and custody of engineering drawings for assigned programs.

- O&M Manuals. The contractor shall maintain a list of required changes to the O&M Manual for each system (references b and c). When reviewing ECPs, trouble reports, failure analyses or other technical documentation, the contractor shall assess and identify any necessary updates to system manuals. Upon direction of the Government, the contractor may be requested to execute periodic updates to each system operations and maintenance manual.
- Planned Maintenance System (PMS). The contractor shall, as requested, perform Reliability Centered Maintenance (RCM) analyses in the development of new and/or revised PMS documentation. These analyses will result in the development of new and/or revised Maintenance Index Pages or Maintenance Requirement Cards (MIPs/MRCs) that form part of the PMS documentation set.
- Engineering Drawings. The contractor shall generate any new and updated engineering drawings necessary as a result of government issued ECPs, and contractor generated ECPs. A drawing management program shall adhere to the accepted practices of reference (h). Technical data shall conform to the Joint Engineering Data Management Information Control System (JEDMICS) requirements of reference (j). The contractor shall maintain the MSF Configuration Design Document Image System CD (CADDISC).
- Metrology and Calibration Data. New or updated metrology and calibration data resulting from government issued ECPs and contractor generated ECPs is to be documented on the respective engineering drawings.

3.2.3 Configuration Management Program.

The contractor shall participate in the MK 16 MOD 1 UBA configuration management program to include configuration identification, configuration control methods, and configuration status accounting. The contractor shall participate in Configuration Control Board (CCB) reviews as defined by the applicable Configuration Management Plan(s).

- ◆ As Built Configuration Data. The contractor shall provide, upon request, an "as built" configuration item data list for each UBA managed under this contract. The list shall identify all equipment by part number, National Stock Number (NSN), or serial number (as applicable) that are included in the UBA. Access to this information will be provided to the contractor as Government Furnished Information (GFI) upon award of the contract.
- ◆ Configuration Control. All modifications will be in accordance with the approved PMS-EOD Underwater Explosive Ordnance Disposal Configuration Management Plan (reference (i)). This plan includes the definitions for Class I and II ECPs, which will be in effect for the duration of this contract.

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3.2.4 Reliability and Maintainability Program.

The contractor shall maintain a reliability and maintainability monitoring and assessment program that includes provisions for collection of R&M data. If requested, engineering analyses of all failures will be conducted and the results provided to the Government. The contractor shall provide analyses to determine operational and maintenance performance measures; identify design and maintenance problems; and provide input to existing and/or future data repositories for use in determining future design and support requirements.

3.2.5 Safety Program.

The goal of the EOD Diving Systems safety program is to identify potential safety risks inherent in the design, manufacture, and operation of systems and where feasible, identify any mitigating effects, which may reduce and/or eliminate these risks. When appropriate, the contractor shall interact with the Navy's Supervisor of Diving and Salvage and other safety-related activities.

- ◆ Safety Reviews. The contractor shall conduct safety reviews of proposed Engineering Change Proposals (ECPs), analyze safety deficiency reports, analyze results of failure analyses, and recommend corrective action when appropriate.
- ◆ NAVSEA Supervisor of Diving and Salvage (SEA 00C). As required, the contractor shall participate and support SEA 00C diving safety-related meetings. The contractor shall maintain technical proficiency and knowledge in the current regulations and procedures required to maintain the MK 16 MOD 1 UBA and the MK 1 Mod 0 MSF in a safe and effective manner in accordance with all applicable SEA 00C policies, including SEA 00C life support certification issues.

3.2.6 Quality Control Program.

The contractor shall assure that specified Quality Control (QC) provisions are maintained by the production manufacturer and depot maintenance activity. Quality assurance provisions shall result in data recorded related to:

- Drawing control
- Material control
- Fabrication and manufacturing control
- Cleaning control
- Testing and inspection control

The authority and responsibility of QC personnel in each of these areas shall be clearly delineated. Records are a major form of objective evidence of proper QC. The QC program shall ensure that records are legible, accurate, complete, and reliable. The contractor shall retain copies of information relative to the quality provisions in sufficient depth, detail, and organization to permit audit and evaluation.

3.2.7 Integrated Logistics Support (ILS).

The contractor shall participate as a member of the integrated logistics support management team and evaluate the effectiveness of achieved logistics support and recommend improvements. These ILS-related efforts include:

- ◆ Diminishing Manufacturing Sources/Material Suppliers (DMS/MS) The contractor will monitor, identify, and propose the resolution of DMS/MS and obsolescence issues. The contractor shall identify DMS/MS or obsolescence situations to the Government as early as possible

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and, when assigned, provide a proposed resolution plan. Possible resolutions may include life-of-type buys or re-design efforts deemed necessary to meet the requirements of the current contract and for the post-contract period. The contractor shall also monitor the status of the ancillary equipment used with the MK 16 MOD 1 UBA. This ancillary equipment includes the MK 11 Buoyancy Compensatory (BC) and the M-48 Full Face Mask (FFM). The monitoring effort shall consist of maintaining current knowledge of these commercial items through periodic market research and manufacturer interaction in order to assess the impact of any planned changes to the configuration of these commercial items on the operation and maintenance of the MK 16 MOD 1 UBA and/or the Mk 1 Mod 0 MSF.

- ◆ Maintenance Engineering. The contractor shall maintain and update maintenance concepts, tasks and criteria for all levels of maintenance during equipment/system life cycle; review and maintain current technical criteria that prescribes the scope, depth, and frequency of maintenance and inspections to be performed. The contractor shall administer the Electronic Technical Feedback Report (ETFBR) program relevant to the MK 16 MOD 1 UBA and the MK 1 Mod 0 MSF. The ETFBR program defines the process for identifying, assessing, and adjudicating proposed changes to the systems.
- ◆ Supply Support. The contractor shall review all appropriate technical data against the allowance parts list (APL) and recommend changes; review military essentiality codes (MECs) and source, maintenance and recoverability (SM&R) codes and recommend improvements; ensure that provisioning reflects proper maintenance and support requirements of approved system configurations; monitor Maintenance Material Management (3-M) reports, Casualty Reports (CASREPs), and other data to determine whether equipment is properly supported. As required, the contractor shall be responsible for the maintenance of the Provisioning Technical Documentation (PTD) and shall interact and maintain coordination with Naval Inventory Control Point (NAVICP) Mechanicsburg as required, including provisioning parts list, on-board repair parts lists, and APL/AELs. PTD shall be maintained in ICAPS format. The contractor shall provide depot supply functions as required in support of the MK 1 EOD Mobile Support Facilities. The contractor shall establish receiving, storage, and issue points for material, components, and repair kits. The contractor will identify and support both on-board and depot repair parts requirements to optimize the systems operational availability throughout the life cycle of the system. The contractor shall provide the management functions, procedures, and techniques used to acquire, catalog, receive, store, transfer, and issue all necessary parts, components, and systems in a timely as needed basis. All D-level spare and repair part requirements will be filled using contractor's on-site inventory. The contractor shall provide traceability documentation from receipt of material to delivery of system end item. Purchase order documentation and certificates of conformance shall be maintained by the contractor and inserted as required into the system certification notebooks.
- ◆ Software Support. When assigned, the contractor shall participate in support of MK16 UBA software efforts. These efforts may include assessment of software related failures, assessment of potential impact to software functions of proposed ECPs, and participation in software safety reviews as necessary.
- ◆ Test Equipment, Tools, Jigs, and Fixtures. The contractor shall review and recommend improvements to test procedures, general and special purpose test equipment, tools, jigs, and fixtures.

3.2.8 Depot Maintenance Support (MK 1 MOD 0 MSF ONLY). The EOD Mobile Support Facility maintenance support is based on two levels of maintenance: organizational level (O-level) and depot level (D-level). O-level maintenance is performed by the Fleet user which may

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include periodic checks of equipment performance, visual inspections, equipment servicing, external adjustments, and removal and replacement of authorized components. D-level repair is any repair/maintenance procedure beyond the planned capability of the Fleet user. Depot actions may include complete overhaul, rebuilding, detailed calibration, and/or complex repairs or modifications. The contractor shall provide depot maintenance support required to maintain the MK 1 Mod 0 MSF in a safe and operational state of readiness. This support shall be provided on an as-needed basis for the duration of the contract. Repair and/or replacement turnaround time shall be less than 30 days. All depot level spare and repair parts requirements shall be filled using the contractor's on-site inventories. This support shall include the following:

3.2.8.1 Certifications.

The contractor shall provide certification documentation as required by the U.S. Navy Diving and Manned Hyperbaric Systems Safety Certification Manual, SS521-AA-MAN-010, and further amplified by the System Certification Authority (SCA), NAVSEA.

3.2.8.2 System Cleaning Certificates.

System oxygen cleaning shall be performed by a NAVSEA-approved cleaning facility that performs cleaning and hydrostatic testing processes IAW approved methods. Cleaning certification documents will be provided for each components and subassembly repaired or replaced within the Scope of Certification.

3.2.8.3 System Weld Certificates.

The contractor shall provide weld inspection certification for each weld conducted during repair, overhaul, or refurbishment. Contractor quality control personnel certified as level II or level III inspectors will conduct the required NDT and provide documentation for each inspected weld.

3.2.8.4 Weld Procedure Certifications.

The contractor shall provide documented evidence of NAVSEA approved weld procedures and shall certify each procedure in accordance with current applicable ANSI weld standards.

3.2.8.5 Facilities

The contractor shall provide adequate facilities to conduct all required repairs, refurbishment's, or overhauls of the MK 1 Mod 0 MSF. Facilities shall include:

- Sufficient controlled storage area to adequately segregate program materials from other materials.
- Environmentally controlled storage area for electronic equipment, valves, gauges, soft goods, and other material and components affected by environmental conditions.
- An "oxygen safe" assembly area.
- A light industrial machine shop.
- A light industrial weld shop including MIG, TIG, Plasma Arc, and automatic weld capabilities.
- Gross cleaning and hydrostatic test facilities
- Electronic Security Monitoring.

3.3 ADMINISTRATIVE INFORMATION**3.3.1 Post-Award Conference.**

The contractor shall host a post-award conference at their facility to review the scope of the contract.

SECTION C – DESCRIPTION/SPECIFICATION/WORK STATEMENT (CONTINUED)**3.3.2 Bi-Monthly Program Reports and Semi-Annual Reviews.**

The contractor shall deliver bi-monthly Progress, Status and Management Reports in accordance with DD Form 1423, Exhibit A. Semi-annual reviews will assess the status of the effort, and identify and resolve issues. The contractor shall provide representatives as necessary to support each review. The first quarterly review following the post-award conference shall constitute the occasion to certify the capability of the contractor to perform its mission in accordance with reference (a).

3.3.3 Shipment of Any Assets (if required).

- To the Contractor from the Government: Shipment of assets to the contractor shall be the responsibility of the government.
- To Government locations from the contractor: Shipment of assets to Government locations shall be FOB Destination.